

## Prevalence and risk factors for *Staphylococcus aureus* colonization in upper respiratory tract of patients

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**Background and Aims:** This study was designed to estimate the prevalence and risk factors for *Staphylococcus aureus* (*S. aureus*) colonization in upper respiratory tract of patients. Increasing concerns about antimicrobial resistance (AMR) and especially about Methicillin-resistant *Staphylococcus aureus* (MRSA) was the main cause of designing the present study.

**Methods:** In February and March 2012, 198 samples were obtained from nasal vestibule and throat of 100 patients had been referred to Ear, Nose and Throat (ENT) clinic of Loghman Hakim hospital in Tehran. The samples transferred to Soybean Casein Digest Agar (SCDA), Mannitol Salt Agar and Baird-Parker agar to separate *S. aureus* from other species and determine positive samples. The process of separation followed by coagulase test and transfer of positive samples to Mueller-Hinton agar in order to determining their susceptibility to methicillin. The presence of MRSA between positive samples were evaluated by disk diffusion method.

**Results:** Between 100 persons had been referred to ENT clinic of Loghman Hakim hospital, *S. aureus* were colonized in 98 persons (98% *S. aureus* positive cases). In 98 positive cases, 55 cases were male (56.12%) and 43 cases were female (43.87%). In 70 cases from all positive cases antibiotic agents had been used during three month period before sampling (71.42%). Between 70 persons with positive culture with history of antibiotic use, 20 cases had been used antibiotics without physicians prescription.

**Conclusions:** According to results, it seems that illogical and excessive use of antibiotics is one of the most important risk factors for *S. aureus* colonization that can lead into MRSA infection. On the other side, it doesn't seem that sexuality of patients make a significant difference in occurrence of *S. aureus* colonization in upper respiratory tract of them.

**Keywords:** *Staphylococcus aureus*; Antimicrobial resistance; Colonization; Risk factors